10/016,705

Filed

December 10, 2001

b.—a lens-shaping member having flexible portions in contact with peripheral edge regions of said dynamic lens for enabling deformation of said dynamic lens for changing said [[lens]]surface curvature;

e.—an elastically flexible member in contact with said lens-shaping member flexible portions; and

d.—first and second lens supporting members, said first lens supporting member having a proximal end region engaging said flexible member_and a distal end region, said second lens supporting member having a proximal end region connected to said lens-shaping member_and a distal end region, [[and a]]the distal end region of at least saidthe first lens supporting member being configured_upon implantation to engage a first region for engaging, upon implanting the intraocular lens in an individual's eye, regions of said individual's eye that [[are]]is responsive to contraction and relaxation of a ciliary muscle disposed in a ciliary body region of said individual's eye.

- 2. (Currently Amended) The accommodating intraocular lens as claimed in Claim 1, wherein said first and the distal end region of the second lens supporting members are configured so that their respective distal end regions are aligned withmember is configured to engage a second region of said individual's eye, the first and second regions comprising generally opposite regions of said ciliary body region when the intraocular lens is implanted in said individual's eye.
- 3. (Original) The accommodating intraocular lens as claimed in Claim 1, wherein each of said first and second lens supporting members are relatively rigid as compared with said dynamic lens.
- 4. (Original) The accommodating intraocular lens as claimed in Claim 1, wherein said proximal end region of the second lens supporting member is rigidly connected to said lens-shaping member.
- 5. (Original) The accommodating intraocular lens as claimed in Claim 1, wherein said lens-shaping member and said second lens supporting member are constructed in one piece.
- 6. (Currently Amended) The accommodating intraocular lens as claimed in Claim 1, wherein said elastically-flexible member is formed incomprises a coil to encircleencircling said flexible portions of the lens-shaping member.

Appl. No. : 10/016,705

Filed : December 10, 2001

7. (Currently Amended) The accommodating intraocular lens as claimed in Claim 6, wherein said intraocular lens is implanted in an individual's capsular bag from which a natural lens has been removed and wherein the distal end regions of said first and second lens supporting members are configured for direct contact with said ciliary body region.

- 8. (Currently Amended) The accommodating intraocular lens as claimed in Claim 7, wherein said elastically-flexible member and said flexible portion of the lens-shaping member each have a larger diameter unstressed-condition corresponding to an expanded diameter of the dynamic lens and a smaller diameter stressed-condition corresponding to a reduced diameter of the dynamic lens, and wherein said elastically-flexible member and said flexible portionportions of the lens-shaping member are configured for elastically returning to said smaller diameter conditions in response to said contraction of said ciliary muscle and for elastically returning to said larger diameter, unstressed conditions in response to said relaxation of said ciliary muscle, thereby enabling the outer diameter of said dynamic lens to elastically expand to its non-accommodating condition, in response to the reduction of said compressive force applied to distal ends of said first and second lens support members by said ciliary body when said ciliary muscle relaxes.
- 9. (Currently Amended) The accommodating intraocular lens as claimed in Claim 7, wherein said elastically flexible member is constructed for tightening and responsive to a compressive force applied to the distal end regions of said first and second lens support members by said ciliary body region upon contraction of said ciliary muscle by squeezing said flexible portions of the lens-shaping member, thereby reducing the outera diameter of said dynamic lens by said lens shaping member and increasing said surface curvature of said dynamic lens—for achieving accommodation, in response to a compressive force applied to distal ends of said first and second lens support members by said ciliary body when said ciliary muscle contracts.
- 10. (Currently Amended) The accommodating intraocular lens as claimed in Claim 6, wherein [[aid]]said intraocular lens is implanted in an individual's capsular bag from which a natural lens has been removed and wherein the distal [[ends]]end regions of said first and second lens supporting members are configured for attachment to the capsular bag adjacent to opposing ciliary body-connected zonules.
- 11. (Currently Amended) The accommodating intraocular lens as claimed in Claim 10, wherein elastically flexible member is configured for being pulled to a larger diameter,

Appl. No. : 10/016,705

Filed: December 10, 2001

stressed condition and said flexible portions of the [[said]]lens-shaping member is configured for are responsive to increases of tension applied to said first and second lens supporting members by said zonules upon relaxation of said ciliary muscle by elastically returning to a larger diameter, unstressed condition, thereby enabling the outerincreasing a diameter of said dynamic lens and decreasing said surface curvature to attain its unstressed, a non-accommodating condition, in response to an increase in tension applied to distal end regions of said first and second lens supporting members by said zonules when said ciliary muscle relaxes.

- 12. (Currently Amended) The accommodating intraocular lens as claimed in Claim 10, wherein said elastically flexible member is constructed forsaid flexible portions of the lens-shaping member are responsive to decreases of tension applied to said first and second lens supporting members by said zonules upon contraction of said ciliary muscle by elastically contracting from said larger diameter stressed conditionreturning to a smaller diameter unstressed condition, thereby squeezing said flexible portions of the lens shaping member to a smaller diameter stressed condition and reducing the outera diameter of said dynamic lens and increasing said surface curvature to attain an accommodating condition for achieving accommodation, in response to a release of tension applied to distal end regions of said first and second lens supporting members by said zonules when said ciliary muscle contracts.
- 13. (Currently Amended) The accommodating intraocular lens as claimed in Claim 6, wherein said intraocular lens is <u>implantedimplantable</u> in [[a]]an anterior chamber of an <u>individual'sthe</u> eye, <u>whereinwith</u> the distal [[and]]end region of said first lens supporting member is <u>configured for direct contact with directly contacting</u> said ciliary body <u>region</u>, and <u>whereinwith</u> said second lens supporting member is <u>configured for attachmentattached</u> to an iris region of said eye.
- 14. (Currently Amended) The accommodating intraocular lens as claimed in Claim 13, wherein said elastically-flexible member and said flexible portionportions of the lens-shaping member each have a larger diameter unstressed-condition corresponding to an expanded diameter of the dynamic lens and a smaller diameter stressed-condition corresponding to a reduced diameter of the dynamic lens, and wherein said elastically-flexible member and said flexible portionportions of the lens-shaping member are eonfigured for responsive to reduction of a compressive force applied to the distal end region of said first lens supporting member by said ciliary body region upon relaxation of said ciliary muscle by elastically returning to said larger

Appl. No. : 10/016,705

Filed: December 10, 2001

diameter, unstressed conditions, thereby enabling the outerelastically expanding a diameter of said dynamic lens to elastically expandand elastically decreasing said surface curvature of said dynamic lens to [[its]]a non-accommodating condition, in response to the reduction of said compressive force applied to distal end region of said first lens supporting member by said ciliary body when ciliary muscle relaxes.

- Claim [[13]]14, wherein elasticallysaid flexible member is constructed for tightening andresponsive to a compressive force applied to said first lens supporting member by said ciliary body region upon contraction of said ciliary muscle by squeezing said flexible portions of the lens-shaping member, thereby elastically reducing the outer-diameter of said dynamic lens-by said lens shaping member and, and elastically increasing said surface curvature of said dynamic lens to an accommodating condition for achieving accommodation, in response to a compressive force applied to the distal end region of said first lens supporting member by said ciliary body when said ciliary muscle contracts.
- 16. (Currently Amended) The accommodating intraocular lens as claimed in Claim 1, wherein said compressible member is constructed from comprises a shape memory metallic alloy.
- 17. (Currently Amended) The accommodating intraocular lens as claimed in Claim 1, wherein said dynamic lens is formed from comprises a silicone or acrylic material.
- 18. (Currently Amended) The accommodating intraocular lens as claimed in Claim 1, wherein said lens-shaping member and said first and second lens supporting members are formed from comprise polymethyl methacrylate.
- 19. (Original) The accommodating intraocular lens as claimed in Claim 1, wherein said second lens supporting member includes a static, non-accommodating lens having an optical axis aligned with an optical axis of said dynamic lens.

20.-27. (Cancelled)

Please add new Claims 28-35.

- 28. (New) An accommodating intraocular lens for implanting in an individual's eye, the lens comprising:
 - a dynamic lens having an elastically deformable curved surface;

10/016,705

Filed

: December 10, 2001

a static haptic having a flexible portion in contact with the dynamic lens and configured to engage, upon implantation, a first region of the eye;

an elastic member in contact with the flexible portion of the static haptic; and

a dynamic haptic coupled to the elastic member and configured to engage, upon implantation, a second region of the eye responsive to contraction and relaxation of a ciliary muscle of the eye, whereby the dynamic haptic is configured, upon implantation, to deform in response to contraction and relaxation of the ciliary muscle, thereby deforming the elastic member and the flexible portion of the static haptic, and changing the curvature of the curved surface of the dynamic lens.

- 29. (New) An accommodating intraocular lens system comprising:
 - a lens having an elastically deformable curved surface; and
- a deformable spring coupled to the lens and configured, upon implantation, to respond to contraction and relaxation of a ciliary muscle of the eye by elastically changing the curvature of the curved surface of the lens.
- 30. (New) The accommodating intraocular lens system of Claim 29, wherein the spring comprises a coil.
 - 31. (New) An accommodating intraocular lens, comprising:
 - a lens having a deformable surface; and

first and second members coupled together to transfer force from the ciliary muscle to the lens, said first member responsive to contractions of the ciliary muscle to apply a first force to said second member such that said second member is in tension, said second member applying a second force to the lens in response to said tension such that the curvature of the lens changes.

- 32. (New) The accommodating intraocular lens of Claim 31, wherein the second member at least substantially surrounds a periphery of the lens.
- 33. (New) The accommodating intraocular lens of Claim 31, further comprising a support member coupled to the lens, wherein the lens has a first surface with a first curvature and a second surface with a second curvature, and wherein the support member supports the lens with the first curvature fixed while the second curvature changes in response to said tension.

10/016,705

Filed

December 10, 2001

34. (New) The accommodating intraocular lens of Claim 31, wherein the first member comprises a forked member that splays in response to contractions of the ciliary muscle and that provides said tension of the second member.

35. (New) The accommodating intraocular lens of Claim 31, wherein the second member comprises a coil.

: 10/016,705

Filed

December 10, 2001

REMARKS

Original Claims 1,2, and 6-18 have been amended and Claims 20-27 have been cancelled. New Claims 28-35 have been added. Applicants believe that none of the foregoing amendments have added new matter to the application.

All of the claims currently pending in the present application are believed to be allowable over the prior art, and such action is earnestly solicited. If, however, any matters remain which could be resolved by Examiner's Amendment, the Examiner is cordially invited to contact the undersigned by telephone so that any such matters can be promptly resolved.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated:

7/25/03

By:

Bruce S. Itchkawitz Registration No. 47,677

Attorney of Record

2040 Main Street

Fourteenth Floor

Irvine, CA 92614

(949) 760-0404

H:\DOCS\BSI\BSI-4285.DOC 072503